

CLAIMS

- 1 1. A navigation system for use in a motor vehicle, comprising:
- 2 a position sensor that that senses the geographic position of said navigation system and
- 3 provides a first navigation system position signal indicative thereof;
- 4 a data bus;
- 5 a navigation computing unit that receives said first navigation system position signal, and
- 6 transmits onto said data bus (i) a first position signal indicative of the position of a trip starting
- 7 location, (ii) a second position signal indicative of a trip destination location, and (iii) said first
- 8 navigation system position signal;
- 9 a monitor unit that includes
- 10 • a memory device that includes map data;
 - 11 • a monitor computing unit that receives from said data bus (i) said first position
 - 12 signal, (ii) said second position signal and (iii) said received navigation system
 - 13 position signal, and accesses said memory device to generate initial image data
 - 14 including map data indicative of the trip starting location, the trip destination and
 - 15 the current position of the navigation system; and
 - 16 • a display device responsive to said image data, to display an initial image indicative
 - 17 of said image data;
- 18 wherein said navigation computing unit receives a second navigation position signal
- 19 indicative of a new position of said navigation system and transmits said second navigation position
- 20 signal over said data bus to said monitor computing unit, which generates revised image data

21 including map data indicative of the trip starting location, the trip destination and the updated
22 position of the navigation system, which is provided for display on said display device.

1 2. The navigation system of claim 1, wherein said position sensor comprises a global position
2 satellite (GPS) receiver.

1 3. The navigation system of claim 2, wherein said first position signal and said second
2 position signal each include longitude and latitude position data.

1 4. The navigation system of claim 1, wherein said navigation computing unit also transmits to
said monitor computing unit via said data bus (iv) an instruction that a place symbol belongs at the
map location associated with the trip starting location, and (v) an instruction that a place symbol
belongs at the map location associated with the trip destination location.

1 5. The navigation system of claim 4, wherein said navigation computing unit also transmits to
said monitor computing unit via said data bus (vi) an instruction that a throughway runs between
the trip starting location and the trip destination location.

1 6. The navigation system of claim 5, wherein said first and second position signals each
2 include geographic data formatted in accordance with the WGS 84 Standard.

1 7. A motor vehicle navigation system, comprising:
2 a position sensor that that senses the geographical position of said navigation system and
3 provides a first navigation system position signal indicative thereof;
4 a data bus;

5 a navigation computing unit that receives said first navigation system position signal, and
6 transmits onto said data bus (i) a first position signal indicative of the position of a trip starting
7 location, (ii) a second position signal indicative of a trip destination location, and (iii) said received
8 navigation system position signal;

9 a road map memory device that includes map data;

10 means responsive to (i) said first position signal, (ii) said second position signal and (iii)
11 said received navigation system position signal and said map data, for generating initial image data
12 including map data indicative of the trip starting location, the trip destination and the current
13 position of the navigation system; and

14 a display that displays an initial image indicative of said initial image data.

15 8. The motor vehicle navigation system of claim 7, wherein said navigation computing unit
16 receives a second navigation position signal indicative of a new position of said navigation system
17 and transmits said second navigation position signal over said data bus to said monitor computing
18 unit, which generates revised image data including map data indicative of the trip starting location,
19 the trip destination and the updated position of the navigation system, which is provided for
20 display on said display.

21 9. The motor vehicle navigation system of claim 8, wherein said position sensor comprises a
22 global position satellite (GPS) receiver.

23 10. The motor vehicle navigation system of claim 9, wherein said data bus comprises a Media
24 Oriented Synchronous Transfer (MOST) bus.

1 11. The motor vehicle navigation system of claim 9, wherein said data bus comprises a Multi
2 Media Link (MML) bus.

1 12. The motor vehicle navigation system of claim 7, wherein said navigation computing unit
2 computes a travel route between the trip starting location and the trip destination, and transmits a
3 signal indicative of said travel route to said means for generating over said data bus.

1 13. A method of generating an image for display by a motor vehicle navigation system that
2 includes a navigation computing unit, a data bus and a monitor unit, comprising:

3 sensing the geographical position of the navigation system and providing a first navigation
4 system position signal indicative thereof;

5 transmitting onto said data bus from the navigation computing unit (i) a first position signal
6 indicative of the position of a trip starting location, (ii) a second position signal indicative of a trip
7 destination location, and (iii) said first navigation system position signal;

8 receiving at the monitor unit said first position signal, said second position, and said first
9 navigation system position signal;

10 generating, at the monitor unit, initial image data including map data indicative of the trip
11 starting location, the trip destination location and the current position of the navigation system; and

12 displaying an initial image indicative of said initial image data.